

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A method of securely accelerating customer premises equipment based virtual private network transmissions over a carrier network comprising the steps of:

establishing an encrypted acceleration tunnel between a VPN acceleration client and a VPN acceleration server in response to a VPN acceleration client request for information, the encrypted acceleration tunnel traversing a wireless network;

transmitting said VPN acceleration client's ~~VPN~~ address and required data information to said VPN acceleration server over said encrypted acceleration tunnel;

establishing an encrypted VPN tunnel between said VPN acceleration server and an appropriate VPN switch, said VPN switch accessing a plurality of thus providing access to the appropriate enterprise content servers, said plurality of appropriate enterprise content servers corresponding with providing said required data information transmitted,[[;]] wherein said encrypted acceleration tunnel and said VPN acceleration server utilized utilize the same network layer in a standard OSI model;[.]

communicating required data responding to said required data information from one of said plurality of enterprise content servers to said VPN switch;

encrypting and transmitting said required data corresponding to said required data information from said VPN switch to said VPN acceleration server over said VPN tunnel, said required data is communicated from said appropriate enterprise content server to said VPN switch prior to encryption and transmission;

— ~~decrypting said required data at said VPN acceleration server; and~~  
accelerating and encrypting said required data using wireless communication performance optimization by said VPN acceleration server; and  
transmitting said required data to said VPN acceleration client; and  
decrypting said required data in response to said VPN acceleration client receiving said required data.

2. (Original) A method as claimed in claim 1 wherein the step of establishing an encrypted acceleration tunnel uses public key infrastructure (PKI) encryption.
3. (Original) A method as claimed in claim 1 wherein the required data information includes at least one of a VPN switch address, user name, and password.
4. (Original) A method as claimed in claim 1 wherein the encrypted VPN tunnel is an IPSec tunnel.
5. (Original) A method as claimed in claim 1 wherein the encrypted VPN tunnel is an MPLS tunnel.
6. (Original) A method as claimed in claim 1 wherein the encrypted VPN tunnel is a L2TP tunnel.
7. (Currently amended) A VPN acceleration server for providing secure virtual private network service for wireless clients comprising:
  - a first module for terminating a virtual private network (VPN) tunnel to a VPNprivate network switch, said VPN switch accessing a plurality of enterprise content servers, said plurality of enterprise content servers providing required data information;
  - a second module for accelerating data for transmission over a wireless network using wireless communication performance optimization; and
  - a third module for terminating an encrypted acceleration tunnel to a wireless client whereby a secure virtual network service is provided between

the ~~private network~~VPN switch and the wireless client, for which acceleration of data on the wireless network is provided, wherein said encrypted acceleration tunnel and said virtual private network tunnel ~~utilized~~ utilize the same network layer in a standard OSI model.

8. (Original) A server as claimed in claim 7 wherein the virtual private network tunnel is IPSec.
9. (Original) A server as claimed in claim 7 wherein the virtual private network tunnel is MPLS.
10. (Original) A server as claimed in claim 7 wherein the virtual private network tunnel is L2TP.
11. (Original) A server as claimed in claim 7 wherein the encrypted tunnel is public key infrastructure encrypted.
12. (New) A method as claimed in claim 1, wherein the wireless communication performance optimization is selected from a group consisting of compression, protocol optimization, caching, traffic management and a combination thereof.